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Submit articles, photos, graphics, videos, story ideas, and nominations for "Signal Spotlight" to the editor here. For additional information, please call (706) 791-7325. Follow the Signal Regiment on Facebook here.

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#### On the Cover

A close-up of Col. James D. Turinetti IV, U.S. Army Signal School commandant and 41st chief of Signal, receiving the guidon from Brig. Gen. Paul Stanton, U.S. Army Cyber Center of Excellence and Fort Gordon commanding general, during a change of responsibility held Aug. 20, 2021. Turinetti will be handing over the guidon to the incoming chief of Signal in a ceremony scheduled for July 15. (U.S. Army Signal School file photo)

# Final thoughts from the 41st Chief of Signal

### Team Signal,

This is a great edition of the Army Communicator as we celebrate the Warrant Officer Corps' birthday with interviews with some of the senior CW5s in the regiment. We will also take a quick look back at last month's Army and Signal Corps birthday celebrations. The 18th Airborne Corps will share their effort to enable the tactical cloud with high-speed expeditionary transport. The Office Chief of Signal (OCOS) team will provide an update on direct commissioning, earlier warrant officer accessions, and share the benefits of being Signal. The 442nd Signal Battalion reaches its 80th anniversary and we'll highlight some of this summer's changes of command.

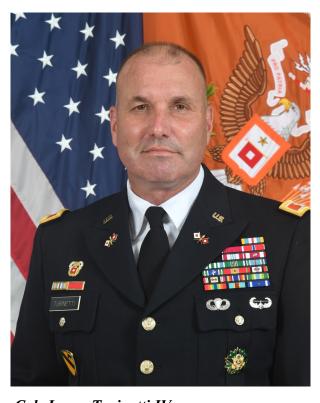
Most importantly, we are sharing a tool for you to use with retention and recruitment (in this current environment, we are all recruiters) to help you explain the benefits and opportunities of joining the Signal Corps.

As I look back on this past year, it has been an honor to serve as your 41st Chief of Signal and Signal School Commandant. No other assignment has the tremendous responsibility ranging from shaping Signal formations with our senior leaders for the Army's future to developing our youngest Signaleers to become leaders, communicators, and teammates. I will be transitioning with Col. Paul Howard on the 15th of this month. He is a native of Georgia, a former member of the Signal Center of Excellence, and well abreast of the Army's Signal efforts - coming out of the Department of Army G6.

I was humbled every time I walked past the photos of 40 Chiefs of Signal that came before me, just as much as every opportunity I had to engage with our Soldiers. Thank you all for the experience. I was proud to serve with you.

Pro Patria Vigilans!





Col. James Turinetti IV U.S. Army Signal School Commandant and 41st Chief of Signal







### Chief warrant officers reflect on service ahead of Corps birthday

### Creating subject matter experts since 1918

U.S. Army warrant officers are highly specialized experts and trainers in their career field. Founded on July 9, 1918, the Warrant Officer Corps was established when an act of Congress created the Army Mine Planter Service as part of the Coast Artillery Corps. Today, the Army has more than 26,000 warrant officers serving in nearly 50 specialties and 18 branches. Through progressive levels of expertise in assignments, training and education, warrant officers support a wide range of Army missions throughout their career.

In honor of the Warrant Officer Corps' 104th birthday, three of the Signal Regiment's chief warrant officers agreed to share some of their experiences and reasons for joining the Warrant Officer Corps.



CW5 Deshawn Bell, U.S. Army Network **Enterprise Technology Command, Fort** Huachuca, Arizona; 33 years time in service.

When and why did you pursue becoming a warrant officer? I decided to pursue the WO path in my second year as a SSG in 1996. I pursued the WO path after seeing the highly skilled WOs in my organization and the influence they had to affect positive action and change to benefit the Army. I had the skills and abilities as a SSG, but not the influence to affect

positive change at the level that I witnessed the WOs had in my organization. I also witness the connection and networking amongst the WO community that attracted me. I wanted to join that club! Why is it important that we acknowledge and celebrate the Warrant Officer Corps birthday? The nickname of "Quiet Professional" hasn't always worked in our favor. We are not grandstanders by nature; we lurk in the shadows at times to ensure mission success. "No one knows what chief does," but he gets the mission accomplished either through direct action or indirect (advisory) action. However, being quiet in my opinion has discouraged us WOs from telling our story and highlighting our contributions and influence to the Army. Celebrating our birthday publicizes and draws attention to our significant contributions.

CW5 Danny Burns, Headquarters Department of the Army G6, Pentagon; 26 years time in service.

How has being a WO impacted your view of the Army? Looking back on 26 years of being in the Army. I have been fortunate to be part of the Warrant Officer Cohort for 21 of them. In that time, I have learned a lot about myself and the Army. The one thing that I think stands out most to me is that there is nothing like the bonds that are created being



in the Army. Being a member of the WO Cohort is like having the biggest family world. There are couches across the country I can sleep on if there is ever a time that one is needed. I have made lifelong friends that are there to support each other through anything and everything. The people I've met and connected with continue to play a huge role in who I am and I could not imagine where I would be today without the support of my fellow warrant officers.

CW5 Chris Westbrook Jr., U.S. Army Signal School, Fort Gordon, Georgia; 26 years time in service.

What advice can you give someone interested in joining the WO ranks? Strive for personal growth, seek to solve your boss's problems, and start your network of people now. Our greatest strength is in our ability to work with other WOs in solving problems whether it's signal troubleshooting in Poland, getting



replacement parts for a battlefield kitchen team, or just getting your HMMWV serviced.

Anything else you'd like to say regarding the WO Corps? My warrant officer colleagues are lifelong buddies. There are WOs retired for over a decade that still offer up meaningful mentorship and advice. Frankly, I have never met such a large, organized group of people devoted to each other's success before. It's truly life-changing.

## Army modernizes Pacific expeditionary signal battalion

### ESB-Enhanced

**Amy Walker** PEO C3T, Public Affairs

As the 307th Expeditionary Signal Battalion, or ESB, celebrated its 80th birthday in May, the Army is converting the unit to an ESB-Enhanced formation. With this conversion comes a smaller, lighter and faster network communications equipment tool suite that will better serve the unit's unique and varied mission sets.

With companies in both Hawaii and Alaska, the battalion provides global network connectivity on short notice to U.S. Army Pacific and U.S. Army North units, often in harsh locations, from secluded island jungles thousands of miles across the ocean to ice-covered mountains in the Arctic Circle.

"We talk about the tyranny of distance, about the challenges created by the vast number of locations and extreme environments throughout the Pacific; this new expeditionary equipment set will help us to support those missions," said Col. Lee Adams, commander of the 516th Theater Signal Brigade, to which 307th ESB-E is assigned. "We are always trying to improve and to provide foundational capabilities for the theater Army. This transition to an ESB-E does that for us; it gives us a better capability to enable the theater Army to fight successfully."

The reduced size and system complexity of the equipment set enables ESB-E units to significantly increase their network support to other units with more nodes and less manpower, while reducing transportation requirements by over 60 percent. The tool suite includes various-sized expeditionary satellite dishes and baseband equipment, high-throughput backhaul radios, and wireless command post technologies. It replaces the unit's much larger Tactical Network Transport At-The-Halt equipment, formally known as Warfighter Information Network-Tactical (WIN-T), which is often transported across the Pacific via cargo ships. The new equipment set can be transported via commercial airline if needed, in hours versus days or weeks.

Prior to his current position, Adams commanded the first unit to be converted to an ESB-E, the 50th ESB-E, during the planning and initial fielding of the unit's pilot equipment. The 307th ESB-E conversion marks the sixth unit that the Army has fielded with the new equipment



Project Manager Tactical Network provides Scalable Network Node (SNN) new equipment training to Soldiers from the 307th Expeditionary Signal Battalion (ESB), at Schofield Barracks, Hawaii, on April 7, as part of the conversion for the unit to a modernized ESB-Enhanced formation. (Photo by Amy Walker, PEO C3T, Public Affairs)

package. The Army's Project Manager Tactical Network, assigned to the Program Executive Office for Command, Control, Communications -Tactical, began fielding the unit with the Scalable Network Node to the companies in both Hawaii and Alaska in March. Fielding the remainder of the initial baseline systems is expected to be complete by the end of the fiscal year.

The Army's agile ESB-E acquisition and fielding approach aligns with its two-year incremental Capability Set fielding process, which enables the service to enhance the ESB-E baseline capability in future capability sets if Soldier feedback warrants it, or when evolving commercial technologies become mature enough to be procured. On the current plan, the Army is fielding several ESB-Es per fiscal year until all of the ESBs have been upgraded to the new baseline capability.



Project Manager Tactical Network provides Scalable Network Node (SNN) new equipment training to Soldiers from the 307th Expeditionary Signal Battalion (ESB), at Schofield Barracks, Hawaii, on April 7, as part of the conversion for the unit to a modernized ESB-Enhanced formation. (Photo by Capt. Kenisha Wilkerson, PM Tactical Network PEO C3T)

"As I talk to the other ESB-E commanders, the [project manager], and its fielding team that is here now, and we get feedback from our Soldiers as they are going through the training, I can see firsthand the accumulation of lessons learned and how the equipment set continues to improve," said Lt. Col. Drew Chaffee, commander of the 307th ESB-E, who also once served as a company commander for the unit.

The ESB-E tool suite is a critical element of Capability Set 21, which delivers smaller, lighter and faster communications systems that are easier to operate and provide increased network communication Primary, Alternate, Contingency and Emergency, or PACE, plan options.

The tool suite provides signal path diversity in congested environments, leveraging numerous high-throughput line-of-sight and beyondline-of-sight capabilities.

"It's critical to have a good PACE plan, to be able to incorporate different transport that may be more survivable in a particular terrain. Every commander wants more options," Adams said. "When we are fighting in a battle environment that is degraded, intermittent or just has latency, I have to have different technologies, different pieces of kit that make me more survivable, make us a harder target to hit, yet allows us to stand still to support multi-domain operations at an assured level. And that is what having these different network transport capabilities provide us."

To enable additional transport paths for improved network resiliency, the Army is working to deliver high-throughput and low latency satellite communications leveraging emerging commercial technologies and services in non-traditional orbits, such as Low Earth Orbit and Medium Earth Orbit. In April, the 307th ESB conducted a demonstration of commercial high-throughput and low latency satellite communications, at the Helemano Military Reservation on Oahu. The unit plans to further experiment with the capability during upcoming U.S. Army Pacific training exercises.

"The name of the game is operational flexibility," Chaffee said. "This new kit is scalable and tailorable to the mission. We have the operational flexibility to tailor our teams, our equipment set, and our footprint to the requirements based on the mission and the environment that we find ourselves in. This smaller lighter ESB-E kit is going to get us there much more effectively and it highlights the United States' ability to support and adapt in some of the most austere and remotely located environments in the world."

#### **About PEO C3T:**

The U.S. Army Program Executive Office Command, Control and Communications-Tactical (PEO C3T) develops, acquires, fields and supports the Army's mission command network to ensure force readiness. This critical Army modernization priority delivers tactical communications so commanders and Soldiers can stay connected and informed at all times, even in the most austere and hostile environments. PEO C3T is delivering the network to regions around the globe, enabling high-speed, high-capacity voice, data and video communications to a user base that includes the Army's joint, coalition and other mission partners.

### Celebrating 80 years of the 442nd Signal Battalion A storied past

Steven J. Rauch

Signal Corps Branch Historian

This month marks the 80th birthday of the 442nd Signal Battalion, currently part of the 15th Signal Brigade at Fort Gordon, Georgia.

The U.S. Army underwent a profound change in 1942 when it expanded to field forces to fight in both Europe and the Pacific Theaters. The U.S. Army Signal Corps grew exponentially as well and new units appeared almost overnight. One of those constituted on July 19, 1942, was the 442nd Signal Construction Battalion, Aviation. Soon after on Aug. 1, 1942, the 442nd was activated at Boringuen Field, Puerto Rico, and remained part of the Caribbean Defense Command until May 12, 1943. During this time, the unit constructed communications lines throughout the Caribbean to include places such as Cuba, Antigua, and Jamaica.

A signal construction battalion was organized, manned, and equipped to physically build communications lines, to include installing open wire pole lines, overhead cable lines, field wire lines, and field cable lines. This mission involved skills and equipment to dig holes, cut down trees to clear a right of way, and moving tons of construction materials needed to establish the communications lines.

On Oct. 7, 1942, Lt. Col. George W. Crockatt was assigned to the battalion and assumed command on Nov. 1, 1942. Crockatt had a degree in mechanical engineering from the University of Michigan, and during WWI he had served as a field artillery officer. He remained in the Army for almost 20 years and served as a base signal officer at Losy Field, Puerto Rico before joining the 442nd. Crockatt would lead the 442nd during combat operations that included several amphibious landings from November 1942 until December 1945.

On May 12, 1943, the 442nd departed Boringuen Field for San Juan where it embarked upon Army Transport #231 and sailed for New Orleans, landing there on May 20, 1943. The personnel debarked and remained in New Orleans for three days until they departed by train on May 24, 1943, for Camp Pinedale in Fresno, California, arriving there on May 29, 1943. At Camp Pinedale the 442nd was assigned to the Fourth



Lt. Col. George W. Crockatt was the first to command then-442nd Signal Construction Battalion, Aviation, shortly after its inception in 1942. The signal officer went on to lead the 442nd during combat operations that included several amphibious landings over the course of about three years. (Photo courtesy of Signal History Office)

Air Force until it departed for overseas movement via the Navy transport Mount Vernon on Jan. 13, 1944, to the

Southwest Pacific Area (SWPA). The 442nd arrived at Milne Bay, New Guinea, on Jan. 30, and began construction operations there under SWPA control until Oct. 24, 1944, thereby receiving its first campaign streamer credit for the New Guinea Campaign.

On Aug. 1, 1944, the battalion was reorganized and redesignated as the 442nd Signal Heavy Construction Battalion, Aviation with an authorized strength of 437 personnel. As the Army advanced east toward the Philippines in the fall of 1944, the 442nd was a full participant in supporting divisions, corps, and field armies as part of the amphibious invasions at Leyte and Luzon. As a result, the 442nd added two more campaign streamers for Leyte (Oct. 17 1944 – July 1, 1945) and Luzon

(Dec. 15, 1944 – July 4, 1945) to their colors. In addition, the battalion received the Philippine Presidential Unit Citation streamer (Oct. 17, 1944 – July 4, 1945) for its role in liberating that country.

Immediately after the Japanese surrender, the Army moved units to occupy Japan. The 442nd was included in this operation and departed the Philippines for Japan on Sept. 17, 1945, where it was assigned to Eighth Army. During this time, the Army deactivated hundreds of units and discharged personnel who had served since the beginning of the war. This resulted in turbulent personnel changes as untrained Soldiers replaced many Veterans. Among those included in the drawdown was Crockatt, who passed command of the battalion to his successor on Dec. 1, 1945. Soon after in February 1946, the 442nd was reassigned to Pacific Air Command (Fifth Air Force) and finally on June 30, 1946 was inactivated in Nagoya, Japan.

The next phase in the life of the 442nd began on Nov. 6, 1967, when it was reactivated and redesignated as the 442nd Signal Battalion. It was allotted to the Regular Army under control of U.S. Army Strategic Communications Command (STRATCOM). The battalion was activated in Korat, Thailand, as a long lines unit with 377 personnel.

The secretary of the Army awarded the Meritorious Unit Commendation (Army) streamer embroidered Pacific Area to the 442nd for the period July 1969 – July 1971 for operating and maintaining the Army portion of the Integrated Communications System in Northern Thailand. Strategically placed terminals and relays provided the Integrated Communications System with some of the longest and most efficient tropospheric scatter shots in the world. The mainline and tributary links comprised approximately 300,000 channel miles of communications and provided telephone, teletype, and data communications.

The circuits supported the mission of U.S. Air Force units in Thailand, who provided direct support to allied forces in Southeast Asia. In all instances, the 442nd Signal Battalion satisfied communications requirements rapidly and reliably. When the U.S. began drawing down forces during the process of Vietnamization, the 442nd again passed into history on June 30, 1971, when it was inactivated in Thailand.

The third life of the unit began on Sept. 23, 1986, when 1st Battalion, 2nd Signal School Brigade was redesignated and activated as the 442nd Signal Battalion. It was assigned to the 15th Signal Brigade, U.S. Army Signal Center and School. Since that time, the 442nd has served as the temporary home for thousands of signal Soldiers while they undertook their training at the Signal School. It still serves proudly in that capacity 80 years after it was born during a world war.



Then-442nd Signal Heavy Construction Battalion, Aviation, occupied Japan in 1945 as shown here. (Photo courtesy of Signal History Office)

The distinctive insignia for the 442nd features three multi-barbed spears to commemorate the unit's three historic campaigns in the Asiati -Pacific Theater during WWII. The battalion's assignment with STRATCOM is indicated by the four divisions of the shield alluding to the four corners of the world. Together with the flashes, they signify readiness for worldwide deployment to fulfill communications requirements. The looped cable refers to the battalion's capabilities in installing operating and maintaining signal centers.



## UNITED STATES ARMY SIGNAL CORPS

The United States Army Signal Corps branch was established in 1860 and has led technological innovation from the Civil War through the modern Global War on Terrorism. The Signal Corps integrates, designs, builds, configures, secures, operates, maintains, and sustains the Army's portion of the Department of Defense Information Networks (DoDIN) consisting of communications and computer networks, information services, cyber security, data operations, electronic warfare, and spectrum management operations (SMO) worldwide in support of U.S. and multinational forces at all levels. Signal support encompasses all aspects of the Army's network infrastructure employing single and multi-channel satellite, tropospheric scatter, terrestrial microwave, switching, routing, video-teleconferencing, and other information technology systems.

Signal provides seamless, secure, continuous and dynamic communications and information systems networks that enable mission command of Army, joint and coalition forces in support of joint, interagency, and intergovernmental and multi-national operations. Signal also provides support to defense support of civil authorities during homeland disaster relief and other events.

With numerous job specialties and placement options around the world, the opportunities to evolve and excel in a signal career are immeasurable.

### LEADERS | TEAMMATES | COMMUNICATORS

### **MARKETABLE SKILLSETS**

Signal Soldiers are leaders who earn and maintain industry standard certifications (Microsoft, CompTIA, Cisco, etc.) funded through Army Credentialing Assistance. Those who choose to make a career in the Signal Corps develop as leaders and may serve as principal advisors and subject matter experts in their field.

When a signal Soldier's military service is complete, they have high potential to return to the civilian workforce with management and technical skills that are in high demand within the private sector at competitive wages.

### TRAVEL, NETWORKING

All types of units require signal Soldiers. From infantry battalions to aviation brigades and military intelligence units, performing the technical skills required for warfighters to communicate across the battlespace is critical to mission success, making signal Soldiers an essential part of Army elements around the world.

### **OPPORTUNITIES ABOUND**

A signal Soldier's success is only limited by his or her own confines. Competitive signal Soldiers have the ability to lead others, serve as instructors, obtain advanced civilian degrees, and train with industry partners.

The following are some of the programs signal Soldiers may have the opportunity to participate in:

• Joint Communications Unit: train to be communication experts and afforded uncommon opportunities as a member of this unique team.

• White House Communications Agency:

Compete for a one-of-a-kind joint service organization dedicated to providing premier information services and communications support to the president.

- Fellowships: compete for branch and Army-sponsored fellowship programs.
- Military Personnel Exchange Program: serve two-or-three-year assignments in foreign nations' forces to promote mutual trust and understanding between the U.S. Army and global partners in support of regional strategic goals.
- Security Force Assistance Brigade: Be among the most highly trained, top tactical leaders in the Army. Their work strengthens our allies and partners while supporting this nation's security objectives and the combatant commanders' warfighting needs.

For more information about Signal Corps careers, visit your career program manager or visit www.goarmy.com.

### The journey to Project Convergence 2022 'Campaign of learning'

#### Chief Warrant Officer 5 Chris Westbrook

U.S. Army Signal School

Not since the 80s when we saw the delivery of the "Big 5" (AH-64 Apache, UH-60 Black Hawk, M1 Abrams, Bradley Fighting Vehicle, and MIM-104 Patriot) have we seen a opportunity to change the dynamic of how we fight. The Army created the Army Futures Command (AFC) and its eight cross-functional teams (CFTs) to close critical capability gaps. To facilitate more rapid experimentation, prototyping, and acquisition, elements of U.S. Army Training and Doctrine Command (TRADOC) and Army Material Command (AMC) were moved under the new four-star headquarters.

The annual capstone event for AFC is Project Convergence, which is best described as a campaign of learning involving Army priorities. To accomplish the overarching goal of Joint All Domain Command and Control (JADC2), this capstone involves elements of the joint and coalition partner forces.

To maximize ideas and potential capabilities, the various CFTs and their associated program executive offices (PEOs), hold technical exchange meetings (TEMs), attend demos, and speak at focused conferences throughout the year. Out of these events, the Army invites industry partners to the Joint Systems Integration Lab (JSIL) on Aberdeen Proving Ground, Maryland, where pieces and parts are brought together in iterative communication exercises to reduce risk, assess efficacy, and improve materiel and processes before culminating in Project Convergence. (It worthwhile to note that the JSIL is managed and ran by scientists, engineers, and of course, an Army signal warrant officer). It is best to think of it as an entire football season where coaches and analysts play the long game in learning about various strengths and weaknesses of the adversarial teams while tweaking their own play strategy to get to the Super Bowl.

The AFC website describes Project Convergence as "...a series of joint, multi-domain engagements to integrate artificial intelligence, robotics, and autonomy to improve battlefield situational awareness,



Soldiers from 82nd Airborne Division take part in an IVAS-enabled air assault exercise on Nov. 3, 2021, on Yuma Proving Ground, Arizona, as part of Project Convergence 21. (Photo by Austin Thomas, Army Futures Command)

connect sensors with shooters, and accelerate the decision-making time-

The first exercise in 2020 was heavily focused on using sensors and automation to reduce the time between identifying a target and putting steel on that target. In 2021, the ability to move vast quantities of data on the battlefield using an initial data fabric concept in a joint environment was further explored.

What will Project Convergence 2022 and beyond bring to the forefront? It is hard to predict given that we may learn new ideas and discard old assertions.

To paraphrase retired Gen. John Murray, the former commanding general of AFC who described it in 2021: Project Convergence is a journey as opposed to a destination. We call it our campaign of learning. Some people would describe it as a demonstration or an exercise. It's all of that and more.

### Signal Corps seeking to grow through direct commissions Strengthening the force

#### **Laura Levering**

U.S. Army Signal School

As the Army expands its recruiting efforts, the U.S. Army Signal Corps is among its branches looking "outside the radar" to grow its commissioned ranks through the Direct Commission Program.

A directive for the program was published in September 2019, at which time the Signal Corps was primarily seeking qualified individuals to fill a need for radio operators-maintainers (25 series) and information technology engineers (26 series). As the needs of the Army changed, so did the needs of the Signal Corps, and the program is no longer open to those interested in being commissioned into the 25 series. Now its greatest need is IT professionals who can bring knowledge and experience to the ranks.

"As of a few months ago ... our focus changed to looking for people with Cloud and data backgrounds," said Maj. Kendra Romain, engineer information technology (26B) career program manager with the U.S. Army Signal School. "Seeing that the intent of the Direct Commission Program is to fill in a gap, we've identified Cloud and data as the gap that the Signal Corps is trying to fill."

To be considered, candidates may be civilian or an NCO currently serving and must have a bachelor's degree in science, technology, engineering, math or similar field. Candidates must also be a U.S. citizen, able to obtain and maintain a Top Secret clearance, meet basic physical standards for military service, and have a strong background in cloud and information network-related skills.

Interested candidates should go to www.goarmy.com to request information. From there, the candidate will be contacted either by Romain or someone else who can assist the candidate with the next steps, which will include an application. The candidate may then be contacted for a telephone interview followed by another conducted by a panel of Signal Corps personnel.



Maj. Kendra Romain, engineer information technology (26B) career program manager, U.S. Army Signal School, speaks with a group of officers attending the Signal Captains Career Course welcome brief at Fort Gordon. (Photo by Laura Levering, U.S. Army Signal School)

"Once selected, their package is sent to the (Director of Military Personnel Management), it's processed with them, then we get the G1 general officer's signature on the memorandum that they are approved, and then once I get the approval, I let my command know," Romain said.

From there, U.S. Army Recruiting Command receives the candidate's information and creates an account so that a recruiter in the candidate's area can reach out to assist with completing the process. If selected, candidates must compete a six-week Direct Commission Course at Fort Benning, Georgia.

Candidates will enter the Army in the rank of captain through colonel, depending on their work experience, education and background. Their first duty station and assignment will be thoughtfully determined by Human Resources Command, Office Chief of Signal, and the receiving unit.

"We send them somewhere they have time to learn what it means to be a Soldier and leader as well as being able to bring their technical expertise to the table," explained Robert Collins III, chief, Officer Division, U.S. Army Signal School.

In other words, it is highly unlikely that these newly commissioned officers will immediately be assigned to a tactical unit or deploy overseas. This is especially helpful for candidates who don't have prior military experience.

"Whether that be here where they can help us build our curriculum or help us build a strategy towards whichever path we're trying to go down or even teach ... we want them to succeed," Collins said.



James Busler, U.S. Army Signal School, talks to a group of officers attending the Signal Captains Career Course welcome brief at Fort Gordon. (Photo by Laura Levering, U.S. Army Signal School)

To date, only two iterations of signal officers have graduated from the program since its inception, leaving many to wonder, "Why?" According to Romain, a lot of it has to do with the program still being new plus the need to be highly selective when looking over candidates.

"It's hard to find people with data background, but I think in two, maybe three years, the pool might expand because now that they know the Army is moving to Cloud and data, they might focus their degrees to those fields," she explained.

Another reason could be the time it takes for a prospective candidate to go through the process before they are selected.

"Our challenge right now is that the process is so long because from the moment that we start doing screening all the way up to the point they get selected to go to the commissioning course, it's almost a year," Collins said.

Both are hopeful that as word about the program spreads, more people will consider it.

"Even though civilian industry is leaning in towards data and cloud, I'm seeing a lot of job opportunity announcements for data ... so I'm thinking it will expand and then we will see more qualified people apply," Romain said.

"I think it's beneficial for those looking to do something bigger than what they're doing now – who feel like they want to serve their country, may be take a pay cut, but want to have an opportunity to do something bigger, something more important ... I think we can appeal maybe more to those types of individuals," Collins added.

To learn more about direct commission opportunities in the 26 series career field, visit https://talent.army.mil/job/fa26.

For information about direct commission opportunities in other career fields, visit https://talent.army.mil/direct-commissioning.

### 50th Expeditionary Signal Battalion-Enhanced at forefront Spearheading modernization

Lt. Col. Mallory Wampler 35th Signal Brigade

The Signal Regiment must enable multi-domain operations for the warfighter today and in the future. We must do so effectively, rapidly, and securely. The Army's Expeditionary Signal Battalion-Enhanced (ESB-E) transformation continues to spearhead our community's modernization and 50th ESB-E continues to be at the forefront of several efforts. The 50th ESB-E recently had several high-visibility opportunities exercise the ESB-E mission and essential tasks, to include no-notice deployments, rapid execution windows and modernization testing.

In January 2022, the Immediate Response Force (IRF) activated to assure and deter Russian aggression. Scalable Network Node (SNN) teams from 50th ESB-E deployed to distributed locations throughout Europe. SNN teams aligned to XVIII Airborne Corps (ABC) separates and augmented 82nd Airborne Division. Teams rapidly deployed with various configurations; teams broke the mold in palletization of kit as well as load plans utilizing the truck/trailer configurations. Teams provided NIPR, SIPR, and U.S. Army Europe and Africa's Mission Partner Environment (MPE) services to supported units. SNN teams pulled voice and data services through Regional Hub Nodes Landstuhl and Bragg and used a variety of transports. The XVIII ABC leveraged the operational flexibility that comes with the SNNs.

The 50th ESB-E also supported XVIII ABC separates stateside to enable various warfighting functions. The 18th Fires Brigade requested both Enroute Mission Command and SIPR Upper Tactical Internet from 50th to reach back to their Home Station Mission Command (HSMC) for command and control of multiple HIMARS Rapid Infiltration (HI-RAIN) operations at the Air Force's Weapons School Integration (WSINT). WSINT trains tactical experts and leaders to control and exploit air, space, and cyber on behalf of the joint force.

In June 2022, 50th teams supported liaison officers and the High Mobility Artillery Rocket System (HIMARS) platoon in order to integrate into joint planning and execution of an Integrated Air Defense Systems (IADS) defeat scenario in large scale combat operations. From the time the tailgate of the C17 is down, the clock starts. The 50th's



Capt. Odalys Curenton, 1st Lt. Brandon Sparrow and members of the 50th ESB-E maintenance team perform rapid palletization of Scalable Network Nodes at Fort Bragg, North Carolina. (Courtesy photo)

team rolled off the airframe and had services up on cradle-point in 9 minutes and up on satellite communications in under 17 minutes, which enabled execution of the digital fires.

The Unified Network Plan underpins Army modernization priorities that are aligned with 50th's partnership with U.S. Army Cyber Command and the Network Cross-Functional Team. In April 2022, the 50th participated in a Software Defined Wide Area Network (SDWAN) experiment. SDWAN architecture will allow the warfighter to simultaneously leverage all available transport methods to improve application performance and increase battlefield agility. Phase I was successful; seven 50th SNN teams confirmed the SDWAN network over various forms of transport. The 50th is working to continue with Phase II, which will focus on multi-tenancy, adding NIPR into the SDWAN fabric and potentially SD-Access for data tagging at the application layer.

The 50th ESB-E's support to the mission cultivated an elite organization. Teams seamlessly integrated in all domains, across geographic combatant commands, and various regional hub nodes. The 50th pushed the envelope and wrote the ESB-E playbook. Teams mobilized swiftly, adapted to missions around the globe, and underwrote risk to provide operational flexibility. What 50th ESB-E accomplished set a precedence on how the Army can leverage ESB-E capabilities.

### 15th Signal Brigade welcomes new commander to Fort Gordon Change of responsibility

#### **Laura Levering**

U.S. Army Signal School

It's PCS season, meaning numerous units across the Army are bidding farewell and welcoming new leaders. The Signal Corps is no exception.

The 15th Signal Brigade held a change of command ceremony June 7, on Barton Field, as Col. Edward W. Kendall relinquished command to Col. Jason B. Haight.

Brig. Gen. Paul T. Stanton, Cyber Center of Excellence and Fort Gordon commanding general, presided over the ceremony. Stanton commended Kendall for his leadership and accomplishments during one of the most unprecedented times in the Army, and perhaps, the world.

"He remained steady during the global pandemic to educate, train, develop and lead an average daily population of over 5,400 Soldiers, and a total tenured population of over 13,000," Stanton said. "[Kendall] easily balanced the requirements of three very different schools operating at different timelines with different priorities; his ability to handle multiple and complex challenges is absolutely second to none."

In his final remarks to "Team 15," Kendall said it was "truly a great sight" seeing them outside on the parade field, as he reflected on the start of his tenure, which began at the height of the pandemic.

"Seeing the formation makes me feel extremely honored and proud to have been a part of this incredible team – a team that has achieved so much over the last two years," Kendall said.

He listed several of the brigade's achievements, adding that what made them more impressive was they were achieved despite COVID.

"You developed and implemented plans that mitigated risks, and safely trained thousands of students, all while maintaining COVID infection rates that were significantly lower than the Army and local community," Kendall said. "No matter how the conditions changed, you always adapted and overcame."

Kendall's new assignment is in Germany where he will serve as the director of Army Network Enterprise Technology Command-Europe.



Col. Jason B. Haight speaks to service members, family, and civilians during a change of command ceremony for 15th Signal Brigade on June 7. (Photo by Laura Levering, U.S. Army Signal School)

Before signing off as Team 15's commander, Kendall introduced his successor. Haight, a signal officer with more than 22 years in the Army, most recently served as the headquarters commandant for U.S. Africa Command. Looking from the podium out towards Barton Field, Haight said the brigade's Soldiers looked "outstanding," then proceeded to thank everyone for attending the ceremony.

"I am proud to serve as a member of this team," Haight said. "All policies remain in effect. Voice of victory. Forge and project power."

The brigade, which is responsible for training an estimated 16,000 Soldiers every year, was constituted in 1940 and has been headquartered at Fort Gordon since 1986.

### **Enabling Tactical Cloud with high-speed expeditionary transport** Lessons learned

#### Lt. Col. Merlin Kynaston

50th Expeditionary Signal Battalion-Enhanced

When the XVIII Airborne Corps (ABC) deployed to Europe in response to the Ukraine crisis, several Starlink terminals on loan from the U.S. Army's Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) provided increased bandwidth to command posts. Nine terminals, spread across three countries, allowed brigade, division, and corps-level headquarters to leverage command and control capabilities during the operation that were traditionally unavailable in a field environment.

The terminals provided command posts with the high-speed connectivity required to enable reach back to the Dragon Cloud and home station services for the first 72 hours while more robust equipment flowed in. Once fully established, the Corps transitioned to a hybrid cloud environment combining reach back for enterprise services and pulling common operatal picture (COP) feeds to our edge devices from the cloud. This would not have been possible using only traditional military satellite communications (MILSATCOM) for transport.

The Army began fielding Warfighter Information Network-Tactical (WIN-T) in 2005. WIN-T's initial concept of employment apportioned 4mbps to brigades, 8mbps for divisions and corps, and shared bandwidth for battalion-level elements; at the time, an evolutionary leap from Mobile Subscriber Equipment's 1mbps data rates. Warfighters suddenly accessed more data at their command posts than ever thought possible. In perspective, mobile phones of the time operated on 2G networks with 100Kbps throughput. The WIN-T concept worked for the war we were fighting, located at static command posts, combat outposts and forward operating bases, allowing 357lbs of servers to sit on the local immobile network.

Today's Army is becoming increasingly data-centric while concurrently preparing for a kinetic fight against a near-peer in large scale combat operations (LSCO). The compute and processing power required to achieve this data-centric warfare is not possible to carry

around at the speed of combat which necessitates the IL6 cloud and greater bandwidth to access the data. Units require maximum access to the cloud when connected and must retain a small edge capability to allow them to fight when disconnected.

XVIII Airborne Corps conducted a Starlink integration proof of concept to evaluate low earth orbit (LEO) satellites as a high-speed transport method enabling cloud reach-back to mission command applications for the Corps. The test ably supported the Corps Main Tactical Operations Center (TOC). Global Agile Integrated Transport (GAIT) facilitated this by expanding its commercial inject capability to enable high-speed data links rather than its traditional 3mbps. During Starlink testing, the Corps achieved SIPR speeds averaging 60mbps.

#### **Advantages**

Commercial low-earth-orbit SATCOM versus traditional MILSATCOM:

- Protected data through a virtual private network (VPN) tunnel and National Security Agency (NSA) Type 1 encryption
- Currently delivers up to seven-times the SIPR bandwidth at onequarter the latency to tactical command posts, only limited by the encryption device
- Leverages commercial global infrastructure
- 0.6 meter dish compared to traditional military 1.2 or 2.4 meter dishes
- Cloud-enabled mission command applications rather than physical TOC locations
- Significantly reduced size, weight and power, enabling rapid employment upon arriving in an area of operation
- Lower visual and electromagnetic signature (looks like other commercial traffic to hide in plain sight)

Corps combined this high-speed transport with a small-form-factor Klas Tactical Data Center (TDC). TDC weighed only 59 pounds and was capable of fitting in the overhead compartment of a commercial aircraft. Corps leveraged the TDC for all command and control capabilities that it would need in a denied, disrupted, intermittent and limited (DDIL) fight,

leaving many of the collaborative capabilities in the cloud environment.

The cloud environment also served as the home for several of Corps' compute and storage intensive applications that utilize Artificial Intelligence (AI) and machine learning (ML) to identify and target potential adversary positions.

#### Recommendations

To enable command posts in data-centric warfare the Army should:

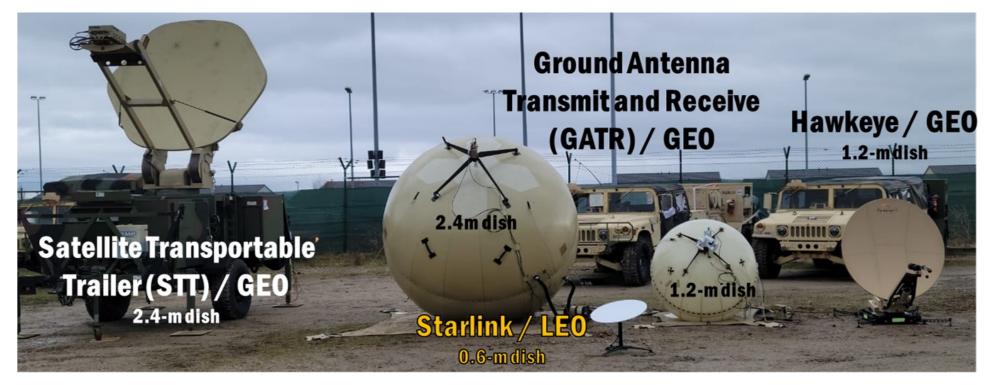
- Containerize all command and control applications to allow tactical forces to fight in a true hybrid cloud environment
- Move tactical services to the cloud, and manage them at the Division and Corps level
- Provide brigades with less complex small-form-factor edge servers that synchronize with the Corps/Division cloud environment
- Field small-form-factor edge nodes (Klas TDC, HP Edgeline) to brigades, divisions, and corps to enable this hybrid cloud environment.
- Field Joint Force Entry divisions with small form factor communications nodes like the Scalable Network Node (SNN) rather than their large Tactical Communications Node (TCN)

- Utilize any high-speed commercial internet connection as transport for military networks
- Create IVPN commercial GAIT injects globally, including landing at locations not tied to our Regional Hub Nodes and TELEPORT sites that are large targets for our adversaries
- Ensure IVPN Commercial GAIT injects can support the throughput requirements of the tactical force

#### Conclusion

As the Army prepares for large scale combat operations, we must deploy, emplace, and displace rapidly to stay ahead of our adversaries. By increasing our throughput and offloading much of our computer and storage to the cloud, command and control capabilities will not slow the pace of the fight.

The lessons learned by XVIII Airborne Corps' rapid European deployment will enable the Corps and the Army to gain decision dominance in our nation's next war and to leverage cloud-based AI/ML capabilities even when adversaries deny and degrade traditional communications systems.



# DEFENDING AMERICA 24/7 -**CELEBRATING LEGACIES OF SERVICE**



The U.S. Army Signal Corps celebrated 162 years of selfless service to the Nation on June 21. Members of the Signal Regiment commemorated the occasion with a cake-cutting ceremony at Brant Hall on Fort Gordon. From left: Col. James D. Turinetti IV, U.S. Army Signal School commandant and 41st chief of Signal; 2nd Lt. Andrew Li, 442nd Signal Battalion, the youngest signal officer present; Pvt. Khalil Elliott, 551st Signal Battalion, the youngest signal Soldier present; and Command Sgt. Maj. Darien D. Lawshea, U.S. Army Signal Regimental command sergeant major. (Photo by Patrick Harris, U.S. Army Signal School Integrated Tactical Network Division)



Established on June 14, 1775, the Army is one of the oldest institutions in the country. Fort Gordon celebrated with a post-wide run and ceremony. Pictured below (left to right) are Col. James D. Turinetti IV, U.S. Army Signal School commandant; Maj. Timothy Stiers, Cyber Protection Brigade and oldest officer present; Pfc. Jordan Byrd, 551st Signal Battalion and the youngest Soldier present; and U.S. Army Cyber Center of Excellence Command Sgt. Maj. Delia Quintero. (Photos by Laura Levering, U.S. Army Signal School)

